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10/590,593	06/13/2007	Peter Daute	5007447.010US1	8566
29737 7590 06/15/2011 SMITH MOORE LEATHERWOOD LLP			EXAMINER	
P.O. BOX 2192	27	WEISS, PAMELA HL		
GREENSBORO, NC 27420			ART UNIT	PAPER NUMBER
			1771	
			NOTIFICATION DATE	DELIVERY MODE
			06/15/2011	ELECTRONIC

# Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

phil.mccann@smithmoorelaw.com lorna.selvaggio@smithmoorelaw.com mary.garner@smithmoorelaw.com

	Application No.	Applicant(s)
	10/590,593	DAUTE, PETER
Office Action Summary	Examiner	Art Unit
	PAMELA HL WEISS	1771
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the c	orrespondence address
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DATE of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  If NO period for reply is specified above, the maximum statutory period was Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim will apply and will expire SIX (6) MONTHS from the cause the application to become ABANDONE	N. nely filed the mailing date of this communication. ED (35 U.S.C. § 133).
Status		
<ol> <li>Responsive to communication(s) filed on 14 O</li> <li>This action is FINAL.</li> <li>Since this application is in condition for allowar closed in accordance with the practice under E</li> </ol>	action is non-final. nce except for formal matters, pro	
Disposition of Claims		
4) ☐ Claim(s) 1-5, 7-19, 21-26 is/are pending in the 4a) Of the above claim(s) is/are withdraw 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-5,7-19 and 21-26 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or	wn from consideration.	
Application Papers		
9) The specification is objected to by the Examine 10) The drawing(s) filed on is/are: a) accomplicated any not request that any objection to the Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the Examine	epted or b) objected to by the I drawing(s) be held in abeyance. See ion is required if the drawing(s) is obj	e 37 CFR 1.85(a). ejected to. See 37 CFR 1.121(d).
Priority under 35 U.S.C. § 119		
a) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of:  1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the prior application from the International Bureau * See the attached detailed Office action for a list	s have been received. s have been received in Applicati rity documents have been receive u (PCT Rule 17.2(a)).	ion No ed in this National Stage
Attachment(s)  1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s) Vail Data	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P	ate Patent Application
	ction Summary Pa	art of Paper No./Mail Date 20110604

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#### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/2010 has been entered.

2. The grounds of rejection remain the same and an additional ground of rejection is below set forth.

#### Information Disclosure Statement

3. The English translation for reference Kunststoffhandbuch, Vo.2/1, Carl Hanser Verlag (1986) pgs 570-595 has been considered.

#### Claim Rejections - 35 USC § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 5. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.

- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schnur et al. (US 2003/0096713)

## Regarding Claims 1-3:

Schnur discloses a lubricating composition comprising a major amount of an oil of lubricating viscosity with an iodine number less than about 4 [0011] comprising a natural and/or synthetic oil and mixtures thereof including esters of di carboxylic acids and polyols [0011]. The natural oils include animal oil [0011]. While Schnur does not expressly disclose a mixture of both a natural and synthetic oil, since it teaches mixtures of oils used for the same purpose and discloses both of the claimed oils, it would have been obvious to one of ordinary skill in the art to use both. "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980)

The intended use of the composition for thermoplastic processing does not further limit the claim as it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand

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alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie,* 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). As such the use of the composition for thermoplastics is not further limiting to the composition.

7. Claims 1-5, 8, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worschech et al. (US 3,875,069) (referred to as '069) in view of Worschech et al. (4,637,887) (referred to as '887)

## Regarding Claims 1-3:

Worschech et al. '069 discloses a lubricant composition for thermoplastic processing comprising (Abstract):

a) at least one natural fat and oil '069 discloses the natural fats and oils such as olive oil, rapeseed oil, coconut oil, palm oil, soybean oil, cottonseed oil and linseed oil are hydrogenated (C7 L37-45) '069 discloses cottonseed oil as a component (C8 L42-44). ('069 C8 L35-45: hydrogenated cotton seed oil which will intrinsically possess an iodine number overlapping the claimed ranges and meeting the limitation for a first component consisting of a natural fat and/or oil with an iodine value below 10. Noting that in the applicant's specification p5 L26-P6 L10 indicates that cottonseed oil is a suitable natural fat or oil which may be hydrogenated to achieve the claimed iodine values). See MPEP 2144.05(I): "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)"

Worschech also discloses the natural oil may be hardened castor oil (C8 L43-47)

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b) at least one lubricant different from the natural fat and/or oil of component (a). ('069 C3 L1-22 mixed esters *meeting the limitation for a second component*)

Worschech et al. '069 discloses the saturation of the long chained mono carboxylic acids affect the physical consistency of the product at room temperature and discloses that a mono carboxylic acid component saturated aliphatic mono carboxylic acid is solid while unsaturated are oil liquids at room temperature. ('069 C6 L31-51).

Worschech et al. '069 also discloses the lubricant component (b) is selected from the group of fatty acid esters of fatty alcohols, di carboxylic acid esters of fatty alcohols and polyol fatty acid esters. (C3 L1-21) and (C6 L61-65)

Worschech et al. '069 et al. does not expressly disclose the iodine value below 10, or below 8, or between 0.1 and 5.

Worschech et al. '887 discloses a lubricant for a vinyl chloride polymer which contains triglycerides containing hydroxy fatty acid resides of natural fats and oils such as olive oil, linseed oil, palm oil, lard oil, herring oil, soybean oil, tallow and rapeseed oil and preferably their mixtures. ('887 C1 L65-C2 L2). Worschech et al. discloses the natural oils are selectively hydrogenated by first epoxidizing them and then hydrogenating them to open the epoxy rings. (C2 L4-22) Worschech et al. also discloses the use of a hydroxyl fatty acid residue formed from rapeseed oil as it has an iodine number less than or equal to 5. Worschech et al. discloses hydrogenated rapeseed oil, soybean oil and tallow all having iodine numbers less than or equal to 5 (C3 L65-C4 L12)

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Worschech '887 discloses the availability of natural castor oil and hardened castor oil is subject to fluctuation and a substitute is needed (C1 L30-42). Worschech '887 compares the hydrogenated oils to hardened castor oil and shows they may substitute for natural castor oil or hardened castor oil (C4 L Worschech '887 discloses that its composition is suitable for thermoplastic molding. (C3 L45-47).

It would have been obvious to a person having ordinary skill in the art at the time of invention to use *the rapeseed oil, tallow, and soybean* composition of Worschech et al. '887 having an *iodine number of less than or equal to 5* in place of the natural or hardened castor oil of Worschech '069 as it is a suitable substitute for castor oil, is suitable for use in thermoplastic lubricants and is not in short supply.

Worschech also discloses the method for processing thermoplastics comprising the steps of incorporating into a thermoplastic polymer a lubricant composition comprising: (a) at least one natural fats or oils with iodine values below 10 and at least one lubricant different from the natural fat and/or oil of component (a) ('069 C3 L1-22 mixed esters) and processing the thermoplastic polymer, preferably polar plastics. (Worschech '069 C2 L30-34 wherein the composition is used in the shaping of thermoplastic material and C9 L25-50 wherein the materials are added to the thermoplastic materials and then the plastic is shaped in any known manner) and (Worschech '069 C2 L55-60 wherein the composition is incorporated in the thermoplastic material).

## Regarding Claims 4 and 5:

Modified Worschech '069 discloses the limitations set forth above which are incorporated herein.

Modified Worschech '069 discloses the components (a) to (b) mixed esters are present in a ratio by weight of 1:3 to 9:1 (i.e. 10:30 to 90:10) thus overlapping the claimed ratio range of 20:80 to 80:20 and 40:60 to 60:40. (C3 L20-22) See MPEP 2144.05(I): "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976);"

# Regarding Claim 8 and 25-26.

Modified Worschech '069 discloses the limitations set forth above which are incorporated herein. Worschech '069 also discloses the lubricant composition wherein component (b) comprises distearyl phthalate. (C7 L49-50).

## Regarding Claims 14-15:

Modified Worschech '069 discloses the limitations set forth above which are incorporated herein. Worschech also discloses the use of natural fats and oils with iodine values below 10 as lubricants with internal and external lubricant properties for thermoplastics, preferably for polar plastics. (Worschech '069 C2 L30-34 wherein the composition is used in the shaping of thermoplastic material and C9 L25-50 where it is incorporated into the thermoplastic material) and (Worschech '069 C2 L55-60 wherein the composition is incorporated in the thermoplastic material)

## Regarding Claims 16, 17. and 18

Rejections to claims 1-5, 8 and 14 are expressly incorporated herein.

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Modified Worschech '069 discloses the limitations set forth above which are incorporated herein. Modified Worschech also discloses the method for processing thermoplastics comprising the steps of incorporating into a thermoplastic polymer a lubricant composition comprising: (a) at least one natural fats or oils with iodine values below 10 and at least one lubricant different from the natural fat and/or oil of component (a) ('069 C3 L1-22 mixed esters) and processing the thermoplastic polymer, preferably polar plastics. (Worschech '069 C2 L30-34 wherein the composition is used in the shaping of thermoplastic material and C9 L25-50 wherein the materials are added to the thermoplastic materials and then the plastic is shaped in any known manner) and (Worschech '069 C2 L55-60 wherein the composition is incorporated in the thermoplastic material).

## Regarding Claim 21:

Modified Worschech et al. '069 discloses the limitations above set forth.

Worschech et al. '069 disclose the natural fat and oil in a mixture thereby meeting the limitation for fused together (Abstract) Worschech et al. '069 discloses the two components may be put together as solids or liquids, etc. meeting the limitation for fused together. (C8 L65-C9 L25 provides various embodiments wherein the two lubricants are combined and meet the limitation for "fused") "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are

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necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)

## Regarding Claim 23:

Modified Worschech et al. '069 discloses the limitations above set forth.

Worschech et al. '069 discloses the lubricant composition is used in an amount of form 0.1 to 5 wt% incorporated into the thermoplastic material (C2 L55-61) falling within or alternatively overlapping the claimed range of from about 0.01 to about 10 parts by weight to 100 parts by weight of the thermoplastic polymer to be processed. See MPEP 2144.05(I): "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)."

# Regarding Claim 24:

Modified Worschech et al. '069 discloses the limitations above set forth.

Worschech et al. '069 discloses the lubricant is added to the thermoplastic material prior to effecting its shaping (C2 L60-63) and may be combined in the melt (C9 L3-5) (meeting the limitation of claim 24 (a).

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Worschech et al. (US 3,875,069) (referred to as '069) in view of Worschech et al. (4,637,887) (referred to as '887 as applied to claim 1 above, and further in view of Alastalo et al. (US 2005/0009957A1)

## Regarding Claim 22:

Modified Worschech et al. '069 discloses the limitations above set forth. Worschech et al. '069 disclose the two components of the lubricant can both be liquid (C8 L65-C9 L3) Worschech et al. '069 discloses the lubricant combinations can be subject to those shaping processes suitable for thermoplastic compounds and may be added to the thermoplastic materials before processing (C9 L25-45) and the shaping can be performed in any known manner (C9 L45-50).

Worschech et al. '069 does not expressly disclose the production taking place by means of spray crystallization.

Alastalo et al. discloses the process of production of propylene copolymers produced by spray crystallization (Abstract) and [0005].

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the composition in the method of Modified Worschech et al '069 in a thermoplastic polymerization process which includes spray crystallization as this is a known method of making polymers.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Worschech et al. (US 3,875,069) (referred to as '069) in view of Worschech et al. (4,637,887) (referred to as '887 as applied to claim 1 above, and further in view of Haack et al. (US 5,889,102)

# Regarding Claim 9.

Modified Worschech '069 discloses the limitations set forth above which are incorporated herein. Worschech also discloses the particularly suitable as mixed esters

are those based on pentaerythrite and stearic acid. (C4 L19-20) (C6 L7 discloses dipentaerythrite)

Modified Worschech '069 does not expressly disclose the lubricant combinations wherein component (b) comprises pentaerythritol tetrastearate.

Haack et al. (US 5,889,102) discloses that pentaerythritol tetrastearate is a known lubricant for use in combination with other lubricants for use with plastics. (C1 L30-50)

It would have been obvious to a person having ordinary skill in the art at the time of invention to use the pentaerythritol tetrastearate of Haack as a lubricant component in Modified Worschech '069 as Haack discloses said lubricant is suitable for use in lubricant mixtures for use with plastics and Modified Worschech '069 already contemplates lubricant components of dipentaerythritol and stearic acid.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Worschech et al. (US 3,875,069) (referred to as '069) in view of Worschech et al. (4,637,887) (referred to as '887aas applied to claim 1 above, and further in view of Dohi et al. (US 2004/0014861A1)

# Regarding Claim 10.

Modified Worschech '069 discloses the limitations set forth above which are incorporated herein. Worschech also discloses the particularly suitable as mixed esters are those based on pentaerythrite and stearic acid. (C4 L19-20) (C6 L7 discloses dipentaerythrite)

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Modified Worschech '069 does not expressly disclose the lubricant combinations wherein component (b) comprises dipentaerythritol hexastearate.

Dohi et al. (US 2004/0014861A1) discloses a material useful in the molding of polycarbonate material which uses dipentaerythritol hexastearate.

It would have been obvious to a person having ordinary skill in the art at the time of invention to use the dipentaerythritol hexastearate of Dohi et al. within the lubricant component in Modified Worschech '069 as Dohi et al. discloses said composition is suitable for use with plastics and Modified Worschech '069 already contemplates lubricant components of dipentaerythritol and stearic acid.

11. Claims 7 and 11-13, 19, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worschech et al. (US 3,875,069) (referred to as '069) in view of Worschech et al. (4,637,887) (referred to as '887) as applied to claims 1 and 16 above, in view of Dohi et al. (US 2004/0014861A1) as applied to claim 10, in view of Haack et al. (US 5,889,102) as applied to claim 9 and further in view of Lindner (US 6,818,689) Regarding Claims 7 and 11-13, and 25-26

Modified Worschech '069 discloses the limitations set forth above which are incorporated herein. Worschech also discloses the lubricant may comprise stearic acid as the long chained aliphatic mono carboxylic acid lubricant component. (C6 L13) Worschech also discloses the use of natural fats (C6 L23) and esters of tallow fatty alcohol (C8 L22-24).

Modified Worschech '069 does not expressly disclose component (b) as comprising stearyl stearate or wherein the hydrogenated tallow is present as the natural fat and oil.

Lindner (US 6,818,689) discloses a lubricant composition for use in the processing of polyvinylchloride comprising an ester of a monofunctional organic acid and a monohydric alcohol wherein the ester is stearyl stearate. (C3 L38-44) Lindner also discloses the use of hydrogenated triglycerides as co lubricants (C4 L42-46) such as hydrogenated tallow (C5 Table I L10)

It would have been obvious to a person having ordinary skill in the art at the time of invention to try to use the <u>stearyl stearate and the hydrogenated tallow</u> (also meeting the limitations of claim 19) of Lindner in the lubricant composition of Worschech '069 as both are suitable for use with thermoplastics and are within the types of components already contemplated by Worschech '069. (I.e. stearic acid esters and esters of tallow fatty alcohol).

## Regarding Claims 19:

Rejections to claims 1, 4 and 11-13 are incorporated herein.

Modified Worschech '069 discloses the limitations set forth above which are incorporated herein.

Modified Worschech '069 discloses, the hydrogenated tallow as component (a) as set forth in rejections to claims 11-13 said rejections are expressly incorporated herein.

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Modified Worschech also discloses the method for processing thermoplastics comprising the steps of incorporating into a thermoplastic polymer a lubricant composition comprising: (a) at least one natural fats or oils with iodine values below 10 and at least one lubricant different from the natural fat and/or oil of component (a) ('069 C3 L1-22 mixed esters) and processing the thermoplastic polymer, preferably polar plastics. (Worschech '069 C2 L30-34 wherein the composition is used in the shaping of thermoplastic material and C9 L25-50 wherein the materials are added to the thermoplastic materials and then the plastic is shaped in any known manner) and (Worschech '069 C2 L55-60 wherein the composition is incorporated in the thermoplastic material).

## Response to Arguments

- 12. Applicant's arguments filed October 14, 2010 have been fully considered but they are not persuasive.
- 13. Applicant argues the low iodine value natural oil is not disclosed by the reference Worschech '069 in view of Worschech '887 and argues that cottonseed oil does not intrinsically possess the claimed iodine value.

The primary reference '069 expressly discloses that *hydrogenated* cottonseed oil may comprise component of the composition meeting the limitation for a natural oil. (C8 L42-44) '069 also indicates the natural fats and oils such as olive oil, rapeseed oil, coconut oil, palm oil, soybean oil, cottonseed oil and linseed oil are *hydrogenated* (C7 L37-45) '069 discloses cottonseed oil as a component (C8 L42-44). As above set forth, hydrogenated cottonseed oil is identified in the instant specification to possess the

claimed iodine value. (the instant specification p5 L26-P6 L10 indicates that cottonseed oil is a suitable natural fat or oil which may be hydrogenated to achieve the claimed iodine values). Worschech '069 discloses the claimed naturally occurring oil.

Worschech '069 in view of Worschech'887 discloses the composition comprising rapeseed oil with the claimed iodine value.

- 14. The intended use of the composition does not does not confer patentability to the claim since the recitation of an intended use does not impart patentability to otherwise old compounds or compositions. *In re Tuominen*, 671 F.2d 1359, 213 USPQ 89 (CCPA 1982). '069 teaches cottonseed oil, the limitation for a natural fat and/or oil with the claimed iodine number is met.
- 15. The examiner notes that the limitations for the first component to "consist of" has been satisfied by the presence of the claimed compositional component. The presence of other compositions is not precluded as the compositional claims and method claims utilize the term "comprising" as does the second component. The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, un-recited elements or method steps. See, e.g., *Mars Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1376, 71 USPQ2d 1837, 1843 (Fed. Cir. 2004)

#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAMELA HL WEISS whose telephone number is (571)270-7057. The examiner can normally be reached on Mon.-Thur. 8:30am-7:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/pw/

/James Goloboy/ Examiner, Art Unit 1771